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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,729	06/11/2002	Jean-francois Fardeau	GER-0278	2572

23413 7590 04/21/2006

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EXAMINER
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NGUYEN, TU T

ART UNIT	PAPER NUMBER
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2877

DATE MAILED: 04/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/914,729

Applicant(s)

FARDEAU, JEAN-FRANCOIS

Examiner

Tu T. Nguyen

Art Unit

2877



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 June 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>08/31/2001</u> . | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### ***Specification***

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or

REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a).

"Microfiche Appendices" were accepted by the Office until March 1, 2001.)

(f) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37  
CFR 1.97 and 1.98.

(g) BRIEF SUMMARY OF THE INVENTION.

(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(i) DETAILED DESCRIPTION OF THE INVENTION.

(j) CLAIM OR CLAIMS (commencing on a separate sheet).

(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A

"Sequence Listing" is required on paper if the application discloses a  
nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if  
the required "Sequence Listing" is not submitted as an electronic  
document on compact disc).

***Abstract***

This application does not contain an abstract of the disclosure as required by 37  
CFR 1.72(b). An abstract on a separate sheet is required.

### ***Drawings***

Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

Claims 4-7 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim 1,2,3, 1 through 4. See MPEP § 608.01(n).

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The claimed invention is directed to non-statutory subject matter. Claim 1 claims both device for measurement of the diameter of optical fibers and method for calibration of the sensors. It is not clear if the applicant intend to claim a machine or a process.

Claims 2-7 are rejected as being depended on the rejected base claim. The claims also do not resolve the 101 problem in claim 1.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-7 are rejected under 35 USC 112 1<sup>st</sup> paragraph because the device in claim 1 does not claim essential elements (i.e. two signal processing systems/sensors) with their connection.

Other claims are rejected as being depended on claim 1.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

1) Claim 1, line 2, the claimed "the fiber" lacks of antecedent basis. It is not clear which fiber among the fibers the device detect defect.

2) Claim 1, line 4, the claimed "the absolute diameter" is ambiguous. It is not clear if the "absolute diameter" is the same "diameter" in claim 1, line 1.

3) Claim 1, line 5, the claimed "the physical model" lacks of antecedent basis.  
What is the "physical model"?

4) Claim 1, line 5, it is not clear if the physical model (7) is the same sensor 7 in line 3 because it is numbered in the same numerical number 7.

5) Claim 2, line 1, the claim "an optical system (4)" is ambiguous. It is not clear if it is the "physical model (4)" indicated in claim 1, line 5.

6) Claim 2, lines 1-2, the claimed "the laser bundles" lacks of antecedent basis.

7) Claim 3, line 2, the claimed "the sensor" is ambiguous. It is not clear which sensor (sensor 6 or sensor 7) the "sensor" is referring to.

8) Claim 3, line 2, the claim "the apparatus" is ambiguous and lacks of antecedent basis. It is not clear what apparatus the claimed apparatus refers to.

9) Claim 3, line 3, "the angle coder" is ambiguous and lacks of antecedent basis. What is the angle coder? Is it a device?

10) Claim 3, line 3, the claimed "reference the angle coder" is ambiguous. How can the angle coder be referenced?

11) Claim 3, lines 3-4, the claimed "a mirror integral to the angle coder" lacks of connection. It is not clear how the angle coder be constructed using the mirror.

12) Claim 3, line 5, the claimed "the optical system" lacks of antecedent basis. What is the "optical system"? is it the sensors or the angle coder?

13) Claim 5, line 2, "the model of fringes" lacks of antecedent basis when the claim depends on claims 1-3.

14) Claim 5, line 2, the claimed "fringes (4) and (7)" is confusing because numerical (4) and (7) are the same numerical (4) and (7) of the physical model in claim 1, line 5.

15) Claim 5, line 3, "the model" is ambiguous. It is not clear if the model is the "model of fringes" in claim 5, line 2 or the "physical model" in claim 1, line 5.

16) Claim 5, line 3, the claimed "the measured signal" is ambiguous. It is not clear if the "measured signal" refer to the diameter, phase, ... in claim 5, lines 1-2 or of the "diameter" or "diameter variations" in claim 4, line 3?

17) Claim 5, line 4, the claimed "the measurements" is similarly ambiguous as explained in claim 5, line 4 above.

18) Claim 5, line 4, the claimed "the diameter" is ambiguous. It is not clear if the "diameter" refers to the "diameter of the optical fibers" in claim 1, line 1, or to the diameter of the "model of fringes" in claim 5, lines 1-2.

19) Claim 6-7, the claimed "the comparison", "the digital counting", "the fringe shift", "the interpolation", "the continuous variation of the fringe phrase" in claim 6 and "the model", "the real signal" in claim 7, line 3 lacks of antecedent basis when the claim depend on claims 1-3, etc. Further, refer to the explanations above for ambiguity of some claimed language such as "the model", etc.

Claims 1-7 rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

Claims 1-7 do not claim any structural connection between elements.

Due to severe problem on the claims, the applicant is suggested to carefully review and amend the claims such that the claimed conform with the US standard.



***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dotson et al (5,283,628) in view of Millet et al (4,847,509).

Due to severe problem on the claims, Examiner assumes that the claimed device comprises: two sensors, calibrating the sensors and deducing the diameter of the measured fiber.

With respect to claim 1, Dotson discloses a system for measuring diameter of an optical fiber (column 1, lines 5-10). The system comprises: a first 29 (fig 2) and a second 31 (fig 2) sensors, calibrating the sensors (column 9, lines 15-20).

Dotson does not disclose deducing the diameter of the fiber. Millet discloses a system for measuring diameter of a fiber. The system comprises the step of: deducing the diameter of the fiber (column 5, lines 49-50). It would have been obvious to modify Dotson with the step of deducing the diameter of the measured fiber as taught by Millet to facilitate the measuring. Further Dotson does not explicitly disclose the claimed "angular calibration". However, it would have been obvious to modify Dotson with different calibrating method for using the system in different environments.

With respect to claim 2, using a laser bundle for measuring a fiber would have been known. It would have been obvious to modify Dotson with the known laser bundle to collect light deflected by the measured fiber in different angles to make the system more accurate.

With respect to claim 3, It would have been obvious a design choice to modify Dotson with a calibrating system as claimed to make the system more accurate.

With respect to claims 4-7, since the claims are improper dependent claims and having severe problems, the patentability of claims 4-7 could not be positively determined in this Office action. Refer to discussion in the "CLAIM OBJECTION" section above. So examiner assumes the cited prior arts read on the claimed limitations.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu T. Nguyen whose telephone number is (571) 272-2424. The examiner can normally be reached on T-F 7:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley Jr. can be reached on (571) 272-2800 Ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tu T. Nguyen  
Primary Examiner  
Art Unit 2877

04/14/2006